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PLANNING SERVICES FOR MANAGEMENT

VENDOR WATCH REPORT

ECONOMICS OF PACKAGED SOFTWARE

OCTOBER 1980

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- ven: on the judgement of
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- INF: experience in data processing and communications, including senior
- Pro: management positions with major vendors and users.

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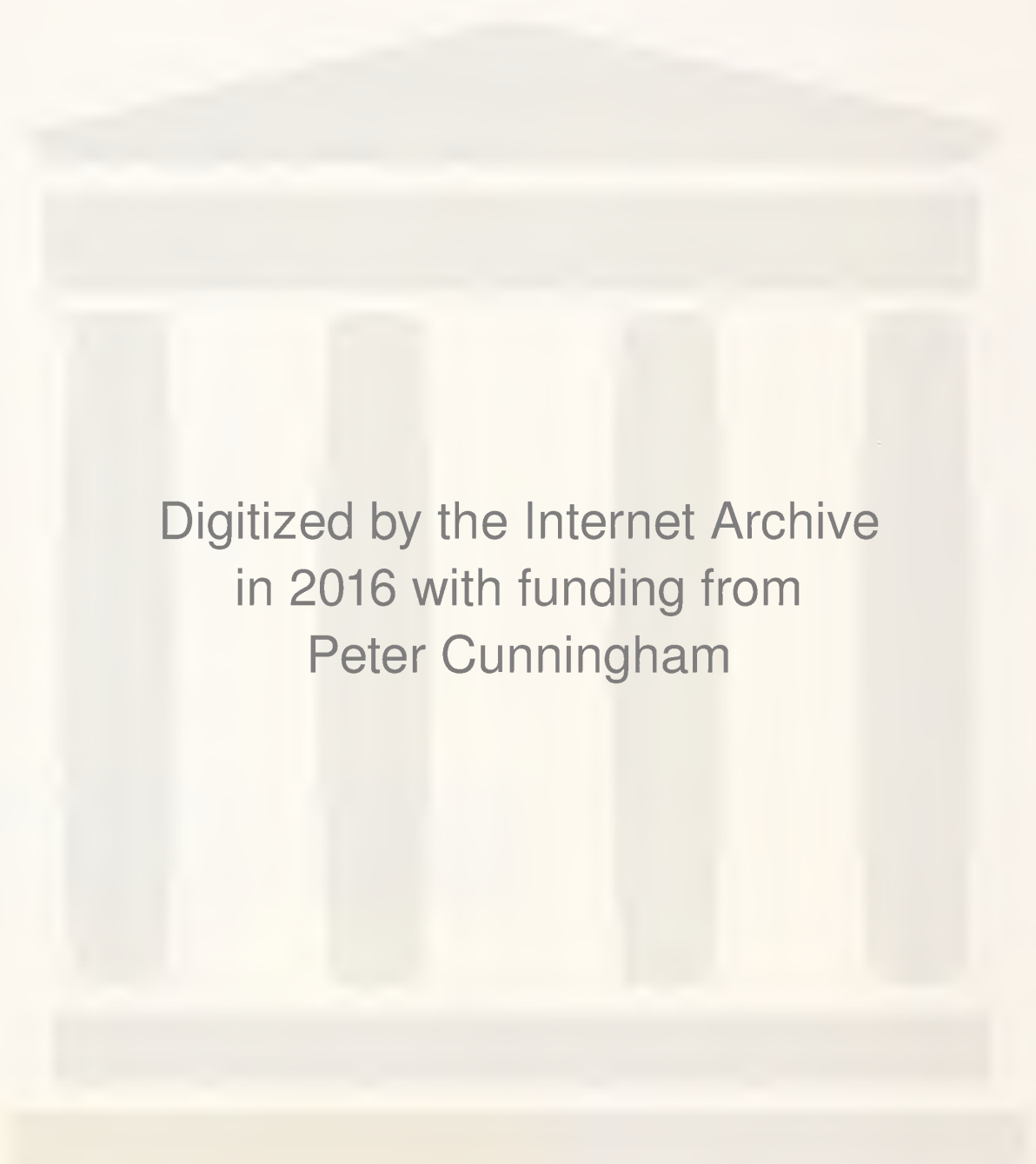
PLANNING SERVICES FOR MANAGEMENT

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VENDOR WATCH REPORT

ECONOMICS OF PACKAGED SOFTWARE

OCTOBER 1980



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ECONOMICS OF PACKAGED SOFTWARE

ABSTRACT

This Vendor Watch Report analyzes packaged software as an alternative in the systems development process. It provides an overview of the sources of software products and general comments concerning these sources. In addition, a detailed outline for evaluating various offerings is presented, including guidelines for contract negotiation.

ECONOMICS OF PACKAGED SOFTWARE

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ECONOMICS OF PACKAGED SOFTWARE

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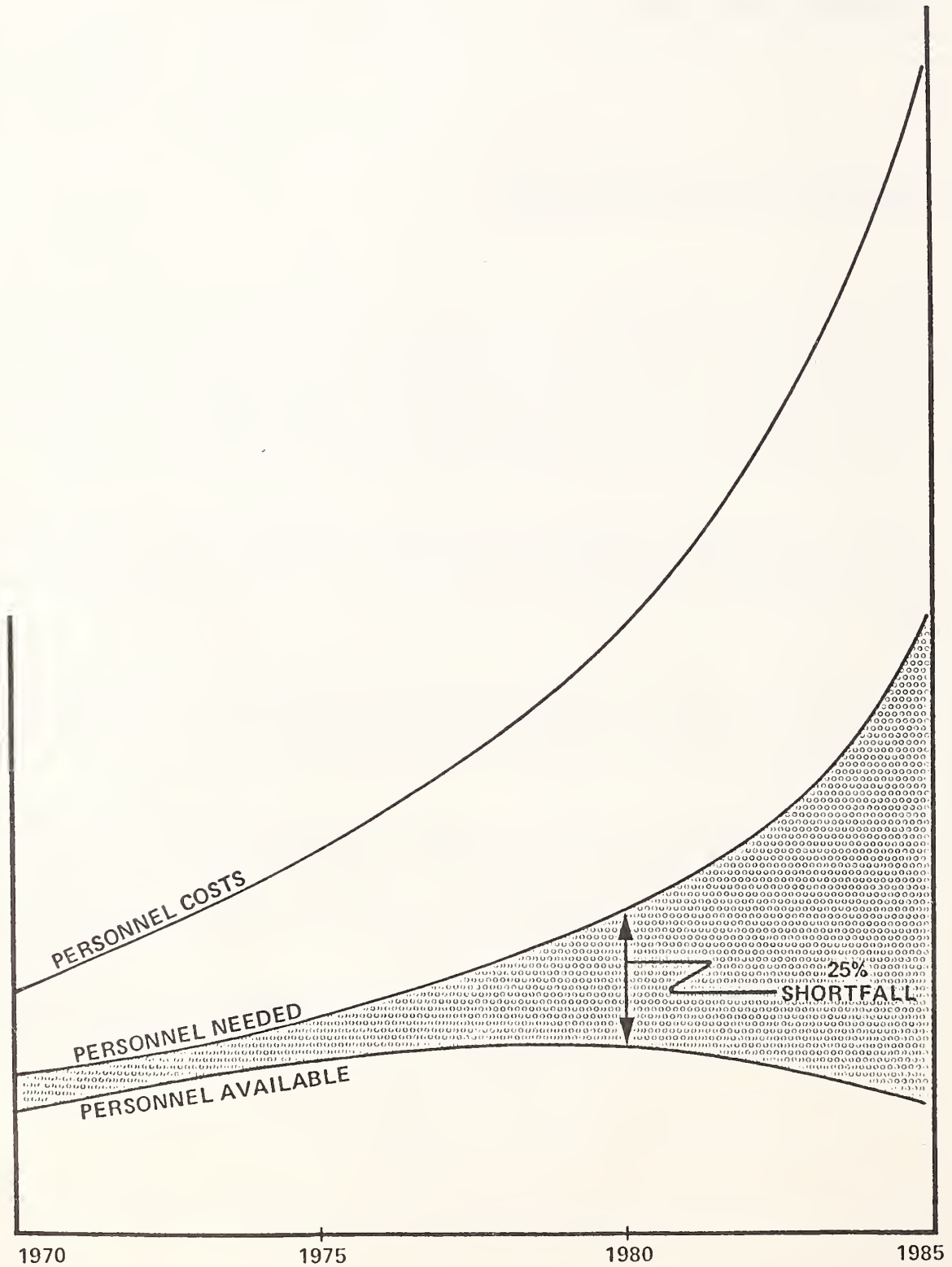
I REASONS FOR USING PACKAGED SOFTWARE

A. LACK OF SKILLED PERSONNEL

- The substantial reduction in the cost of computing power in the past decade has spawned an extraordinary proliferation of computer systems. Unfortunately for the owners and managers of these systems, the population of skilled analysts and programmers has not kept pace with the systems.
- There is a critical shortage of skilled personnel today, and it has been projected that that shortage will increase in the 1980s as illustrated in Exhibit I-1.
- The cost of hardware is expected to continue to decline in the 1980s, while the cost of skilled programmers is expected to continue to rise.
- Regardless of cost, many EDP managers are going to find that skilled systems personnel are just not available. In a recent INPUT study, 60% of the respondents reported a "moderate" to "severe" shortage of systems personnel.
- In light of this crisis, packaged software may present the only possible solution to this problem.

EXHIBIT I-1

THE SHORTAGE OF SOFTWARE PERSONNEL



B. USER DEMANDS

- It is not uncommon today for data processing operations to have backlogs of user applications waiting to be programmed.
 - In some cases the backlog is measured in years, not months.
 - Users are turning increasingly to outside service organizations to fulfill their needs.
- Users are demanding immediate solutions, and they are looking for alternatives when their in-house data processing staff says "next year."
- INPUT has reported and continues to forecast an explosive growth in the sale of turnkey systems. This growth is fueled by:
 - Unprecedented user demands.
 - A package solution made possible by packaged software.
- Usually, the systems department is involved in, and can exercise some control over, the purchase of turnkey systems; but that is rarely the case in the procurement of remote computer services.
- Many corporations have users who spend tens of thousands of dollars a month on computer services, of which the chief data processing executive is not even aware.
 - Users have often been so frustrated in their attempts to fulfill their system requirements that they no longer even consider the in-house system as a possible alternative, but go directly to an outside service organization.

- The kinds of solutions that the user is seeking and finding in computer services and turnkey systems are also available in packaged software.
 - Packaged software is available when the user needs it, which is now.
- It is also available at a reasonable cost - often a fraction of the cost of the alternatives.
- It is the systems department's responsibility to see that the user considers all of the alternatives and makes a wise choice among them.

C. SOFTWARE COST SAVINGS

- Properly selected and utilized packaged software can produce enormous cost savings for any organization.
 - Typically, packaged software costs less than 10% of what it would cost to produce in-house.
 - Similar savings are also available for maintenance and enhancements of the software.
- Development budgets for sophisticated management information systems today are measured in millions of dollars.
 - Only the largest organizations can contemplate such projects, and only if they have the skilled personnel to implement them.
 - A number of these systems are available as packaged software for well under \$100,000.

D. LOWER RISKS

- The risks involved in purchasing packaged software are substantially lower than the risks associated with the development of software.
- Buying packaged software involves a known quantity. The package has been specified, designed, written, documented, tested, de-bugged and installed and is completely operational.
- Building software involves budgets and schedules that are rarely met.
- Building software also often requires systems or applications knowledge which is either not readily available or, at best, somewhat uncertain and unknown.
- Highly specialized hardware, communications and data base expertise may be required for applications software design. These skills may not be available at an affordable price.
- Buying packaged software is not a reckless process if one follows a sound evaluation process.
- It is the purpose of this paper to present such an evaluation process.

II SOURCES OF PACKAGED SOFTWARE

A. SOFTWARE COMPANIES

- There are over a thousand firms dedicated to the development and sale of packaged software.
 - These firms range in size from one-person operations to thousands of employees.
 - Many of these firms specialize in one software product while others offer a rather extensive selection.
 - The average software house offers fewer than a half dozen products.
- Software companies constitute one of the fastest growth industries in the United States. INPUT estimates that the software industry will grow at 29% for the next five years.
- Software companies generated \$1.7 billion in revenues in 1979, which are projected to grow to \$7.9 billion by 1985.
- Most software companies are very specialized, sometimes dealing with a specific application for a single industry.

- Many software companies are packaging their software with hardware to produce turnkey systems.

B. SOFTWARE BROKERS

- Most software companies are small, single-location firms with limited marketing capabilities.
- Software brokers lend valuable assistance to the small software company in the sale and distribution of software.
- Some software brokers are fully staffed to install and support the products they sell and to train the user's personnel.
- The quality of products sold by brokers can vary widely, so prospective purchasers of software should carefully review their offerings.

C. USER GROUPS

- Computer user groups can provide sources of software from among their membership.
- This source can be particularly valuable for extremely specialized applications software, since software companies may have little to offer to such a small market.
- This source can also be fraught with above-average risks in that the software has usually been developed for a single specific user and the needs of other users may not have been considered in its design.

- The quality of documentation and level of support provided for software developed by users are generally poorer than those for products produced by software houses.
- These packages often have very few users and consequently have not really undergone the tests of the marketplace.
- Software packages developed by users are usually inexpensive and may be worth their cost. However, low-cost software can be difficult to use, difficult to install, have operational "bugs," etc. Extremely careful analysis of this software package alternative is required.

D. SERVICE COMPANIES

- Remote computing services (RCS) companies are relatively new in the packaged software business.
- Many RCS vendors are selling their software as a part of either a turnkey system or a user site hardware service (USHS).
- Some of their software is available in an unbundled package, either:
 - Directly from the RCS company.
 - From a third party who originally developed the software and licensed it for resale to the RCS.
- Very large users of RCS will often demand - as a condition for awarding their business to a vendor - the right to purchase the software in the future for use on their in-house machines.

- Buying a software package from an RCS vendor offers the unique advantage of being able to use the software on a trial basis in the service environment prior to making the purchase decision.
- RCS vendors are also generally very strong in the areas of documentation, training and support.
- Systems departments should monitor all expenditures for RCS and acquaint themselves with any purchase options available on the software being used or proposed.
- It is not unusual today for a user department to find that its RCS bill eventually reaches the \$50,000-a-month-or-higher level for a single-decision support system.
 - In the early stages, it is wise to plan for future growth.
 - Providing for a purchase option with an RCS vendor can result in substantial savings as usage increases.
 - The other alternative, USHS, can also provide similar benefits.

E. TURNKEY SYSTEMS COMPANIES

- The turnkey systems industry is growing at incredible rates. INPUT estimates that this industry grew by 43% from 1978 to 1979.
- These firms provide all of the hardware and software as a package to satisfy the needs of a particular application.
- The growth of this industry indicates that users like vendors who assume complete responsibility for their applications.

- Turnkey systems are available in a range of prices from under \$1,000 to over \$1 million.
- Turnkey systems should be explored particularly for industry-specialized applications.

F. COMPUTER STORES

- Computer stores are becoming very valuable sources of packaged software.
- The stores often act as brokers or distributors of software vendors.
- A number of the personal computer manufacturers are developing and selling serious software for the business market.
- Systems managers should visit their neighborhood computer store.
- Some of the information analysis packaged software available for personal computers is surprisingly powerful and very suitable to business planning applications.

G. MAINFRAME MANUFACTURERS

- Computer manufacturers should be considered when evaluating packaged software.
- Users should not consider "free" software free because the cost of installing and using a "free" package can exceed the cost of a purchased one.

- Computer manufacturers of software may require upgrading a machine by adding peripherals which might not be required with another vendor's packaged software.
- Users should subject all packaged software, whether supplied by their equipment manufacturer or not, to a very careful evaluation.
- Users should not limit their search for packaged software to the manufacturers of their equipment. Independent software companies often provide software that is superior to the manufacturer's package.
- Manufacturers are generally not very highly motivated to sell the most efficient software.

III EVALUATING SOFTWARE AND SOFTWARE VENDORS

A. DEFINING REQUIREMENTS

- As with a package one would develop in-house, the first step - and the most important - is to define the requirements for the software package.
- EDP managers should develop fairly detailed specifications of the job to be performed by the software including:
 - All data to be input.
 - Calculations to be performed.
 - Output to be produced.
 - Volumes of inputs and outputs.
 - Communications required.
 - Interface with existing and planned systems and procedures.
 - Any requirements in respect to equipment to be employed.

- Any requirements for specific operating systems or programming languages.
- Time constraints for input, processing and/or output.
- Although users may prefer to run the software on their existing hardware and operating system, and with a specific language, they should evaluate all software without those restrictions.
 - The best packaged software to fulfill the requirements may not be available in that specific environment.
 - The right software may be worth procuring new or additional equipment to run it on.
- All prospective users of the software should be involved in, and approve, the software specifications.
- In defining the requirements, one should be liberal in the assumptions about the growth of the applications software usage, and plan for at least five years of growth.
- Categorize each requirement as either essential or desirable.
- The specifications should be for the ideal system, but one should be prepared to compromise or change requirements.

B. LOCATING THE SOFTWARE PACKAGES

- There are over ten thousand software packages on the market.
 - It is very likely that someone has already written a package that will fulfill most of the requirements users have defined.
 - With a little effort, users should be able to find a number of packages for their consideration.
- Three of the best sources of likely packages are International Computer Program (ICP), Datapro and Auerbach publications.
- User groups can often provide information about available software.
- Trade associations can often provide software information.
- Trade publications such as Datamation, Infosystems and Interface often publish lists of available software as well as advertisements for packaged software.
- Trade shows often provide a forum for software vendors who cater to a specific industry.
- Advertisements in the trade press also call attention to available products. The products advertised are generally from the large vendors and may not be the best package to solve a user's problem.
- Specialized consulting firms such as INPUT can provide assistance in identifying packages and vendors.
- Users within the same industry may be able to assist in identifying software packages.

C. PROCEDURES FOR REQUESTING INFORMATION

- A prospective purchaser of a software package should realize that the evaluation process can be very time-consuming.
 - If the software package is very important to the organization and/or very expensive, one should allocate sufficient time to evaluate the products.
 - Procedures can be established which will minimize the time required to evaluate products and vendors.
- One procedure that should be used is the request for information (RFI).
 - The request for information is a tool used for the preliminary screening of candidate software packages that enables the buyer to systematically review the prospective packages with a minimal expenditure of time.
 - The RFI should spell out the ground rules of the evaluation process and the information required to complete that process.
 - Defined requirements should be compiled into two checklists:
 - The first checklist should contain all requirements that are essential and critical. This list should contain only items that are mandatory, as it will be used in the initial elimination round.
 - The second checklist should contain all the desirable requirements. These items should be rated according to their desirability, but the ratings should not be disclosed to the vendors. The ratings can be used to score the packages in the second elimination round.

- In addition to the checklist, prospective buyers should define the general environment in which they would like to operate the software, which should include a description of the system, its peripherals, operating system and language.
- The above list should be put into a letter and sent to all of the selected prospective vendors. The letter should point out that only written responses are acceptable and that sales calls are not welcome.
 - . Buyers should give the name of one individual in their organization who will respond to phone inquiries to provide clarifying information in respect to the RFI.
 - . The vendor should be told to send appropriate product literature, price lists, contracts and general information about the company. If the company does not have an annual report, some type of profile should be included. A general capabilities brochure or profile describing all of the company's products would also be desirable.
- Prospective buyers should make it clear in their letter that they are not requesting a proposal at this time, but only general information and an indication on the checklist of whether the vendor has the capabilities required in its software package.
 - . They should also indicate that the material is required by a certain date, which should be about three weeks from when the letter is sent.

- Prospective buyers should tell each vendor that proposals or further information will be solicited from the most promising candidates within a defined timeframe. One month from the above due date should provide adequate time for the initial screening. All vendors should be notified of a decision by the date given.

D. VENDOR PROPOSALS AND PRESENTATIONS

- After all the vendors have responded to the RFI, the information gathered should be evaluated and all but two to five vendors eliminated.
- At this point, one should issue a request for proposals (RFP).
- The RFP should be more specific than the RFI and may, in fact, be expanded based on the information initially provided by the vendors.
- An extensive list of evaluation factors is provided in the following two sections (E and F).
 - A number of these can be used in the RFI stage.
 - All of them should be addressed when soliciting and evaluating proposals.
- In addition to submitting proposals, vendors should be invited to make on-site presentations to the selection committee.
- In both the proposal and the presentations, vendors should be directed to address specific issues that are particularly important.

- The presentation is especially valuable in evaluating the people with whom one will be doing business.
 - If the software one is buying is a significant investment and will require continued interface with the vendor's marketing and technical people, this is an excellent time to assess them.
 - Remember, although it's impressive when the vendor's senior management and headquarter specialists are present, it will be the local representatives with whom one will have the most contact and on whom one will mostly depend for service.
- After all the proposals and presentations are made, one should evaluate all of the data and make a decision.
- Once the decision is made, one should negotiate the terms of the agreement. Advice and information on contracts and negotiations are offered in Chapter IV.

E. RATING THE SOFTWARE

I. FUNCTIONALITY

- The software should meet all of the minimum mandatory specifications.
 - If none of the vendors was able to answer all of the minimum specifications, they should be reviewed to determine if they are really essential.
 - If the requirements are indeed valid, but none of the vendors could satisfy all of them, a prospective buyer may have to broaden the search or request that the most promising vendors propose how they could comply with the minimum requirements.

- If a number of vendors were able to satisfy the minimal requirements, the next step is to evaluate how well they satisfy the desirable requirements.
 - Some vendors may have added desirable items that were not on the checklist. These items should also be assigned a rating among the other desirable requirements.
 - The ratings should be added up for all of the desirables checked on the list, and a total score derived for each vendor.
 - The candidate vendors should now be narrowed down to three to six vendors.

2. HARDWARE REQUIREMENTS

- One should determine whether the software package will operate in the specified hardware environment.
- If it does, there is no problem.
- If it does not, one should determine the cost of additional hardware and factor that into the decision.
 - The software that is most consistent with the requirements might be available only on a turnkey system, which should be considered on a total cost basis.

3. LANGUAGES AND SYSTEMS SOFTWARE

- Prospective buyers should determine whether:
 - The software is compatible with the operating system utilized in their installation.

- The language employed is familiar to their programmers.
- It will be necessary for their programmers to support, modify or enhance the software in the future.
- The package is written in a standard language that is widely available and supported.
- The software is available to run in a wide range of environments and system configurations, and whether there are trade-offs in performance and/or cost in the different environments.

4. PERFORMANCE

- How efficiently the software performs may be an important criteria in the selection process. Prospective buyers should:
 - Ask the vendor to demonstrate the software for them.
 - Run benchmarks and compare software performance.
 - Solicit performance information from other users of the software.
- If the software cannot be demonstrated or is not operational, then that should weigh heavily against the vendor involved.

5. FLEXIBILITY

- Certain products are extremely flexible, which may be a plus in prospective buyers' estimation of that product, but they should be aware that the added flexibility usually means added cost. If they don't need all of the flexibility, they may be paying for more than they can use.

- In addition to front-end cost, flexibility usually impacts performance by reducing efficiency of execution and/or requiring extraordinary machine resources.

6. INSTALLATION

- The vendor should be prepared to provide a level of support commensurate with the cost and complexity of the package to be installed.
- The vendor should provide a clear outline of what is required to install the package, which should include:
 - Any considerations involving a conversion from the buyer's current system to the new installation.
 - Training required for all personnel, from clerks to programmers to managers and users.
 - Qualifications and background of the vendor's personnel who will be providing installation support and training.
 - A reasonable time schedule for the implementation of the software.

7. DOCUMENTATION

- Clear, comprehensive, understandable documentation is essential for the effective use of packaged software.
- Appropriate documentation should be available for all personnel who interface with the system, including:

- Clerks.
 - Analysts.
 - Programmers.
 - Operators.
 - Users.
- The vendor will not be as readily available to answer questions regarding the software as in-house analysts and programmers, so the standards and quality of the documentation should be very high.
 - The care taken to document packaged software will probably reflect the care taken in its design and development, and so it may also be a measure of the quality of the software itself.

8. PRODUCT SUPPORT

- The level of continuing product support that the vendor provides should be an important criteria in software selection.
- It should be determined whether the vendor has a good distribution system for both software fixes and releases of system enhancement.
- Prospective buyers should determine whether:
 - The software can be impacted by exogenous factors such as changes in the law (taxes, for example) and if the vendor has a history of responding in a timely fashion to such changes.
 - The product is important enough to the vendor so that he is continuously upgrading it and releasing new versions.

- The releases have a minimal impact on installations.
- The releases involve additional fees, or whether they are covered in the basic agreement.
- Training is provided, both for initial and ongoing requirements.
- Training is provided on a bundled (no additional cost) or unbundled (additional cost) basis, and how that may change in the future.
- Need for on-site assistance and consultation is anticipated, and whether the vendor can provide it.

9. OPERATIONAL STATUS

- Software vendors have been known to indicate that their software has certain capabilities which may not in fact be operational.
 - The vendor may have sincere intentions to provide these capabilities prior to installation, but they may not be as reliable and proven as expected.
 - A check with other users, as well as demonstrations and benchmarks, should prove that all capabilities are there as represented.
- One of the reasons packaged software is an attractive alternative to in-house development is that most of the risks of development have been eliminated.
 - If the software is not fully operational, buyers will be assuming some risk they originally intended to avoid.
 - If development must be conducted to bring the software up to requirements, their cost and schedule should be clearly spelled out in the contract along with appropriate penalties for failure to perform.

10. USER GROUPS

- Certain software packages are so widely used (a few with over a thousand installations) that user groups have been formed by the vendors' customers.
- Prospective buyers should determine whether such a group exists and consider it a real plus if it does.
- User groups can not only provide valuable assistance in the selection process, but can also exercise strong leverage with the vendor when enhancements are designed.

11. ORIGINS

- It is worthwhile to explore the genesis of a packaged software product.
- A product that was developed with the intent of selling it to a broad market is generally much better than a product that was developed for a single end user and then modified or enhanced for resale to other installations.

12. VALUE

- Buyers should assess the value of the packaged software in benefits measured in dollars.
- Buyers should estimate how much it is worth to solve the problem the software addresses.
- If a dollar value can be assigned to the various detailed requirements specified, a more scientific evaluation criteria can be established for reviewing the alternatives offered by the various vendors.

13. COST

- All of the cost, both direct and indirect, should be estimated for acquiring and using each software product evaluated.
- Cost can vary substantially from vendor to vendor for products that appear essentially the same. This can be due to differences in pricing schedules for various options or the differing amounts of support provided for the packages by the vendors.
- Items that will contribute to the total cost of a software package include:
 - The price of the software.
 - Maintenance fees.
 - Modification costs.
 - Enhancement costs.
 - Additional hardware costs.
 - System and procedure changes.
 - File conversions.
 - Training costs.
 - Additional personnel required.
 - Installation costs.
 - Production operation.

- The cost should not only be less than the value received, but should also be substantially lower than the in-house development cost for the same system.

F. RATING THE VENDORS

1. EXPERIENCE

- The experience a vendor has should be evaluated in several ways, including:
 - The amount of time a vendor has been in the software business.
 - The amount of time a vendor has sold the particular package.
 - The experience of the principals prior to entering the software business.

2. SIZE

- Generally, larger organizations should rank higher than smaller ones.
- If an organization has more than a million dollars in annual revenues or more than 20 employees, it is probably satisfactory.

3. CUSTOMER BASE

- A large customer base is definitely desirable in a vendor.
- It is particularly good when a vendor can provide a list of reference customers using the software product.
- The number of customers should be evaluated with respect to the total number of potential users. A highly specialized industry package will have a much smaller market than a general data base management system.

4. PROFITABILITY

- Vendors with demonstrated financial stability should be preferred.
- The continued useful life of a software product is dependent upon the vendor's ability to continuously enhance and maintain it, which to some extent is dependent upon a positive cash flow.
- If the vendor is not a public company (which most are not) and the software package requires a substantial financial commitment, then one should request copies of audited financial statements going back as far as five years.

5. PRIMARY MARKETS

- Vendors should be evaluated on the basis of their commitment to the software business.
- Buyers should give higher ratings to a company that is primarily dependent on software sales as opposed to one for which it is only a peripheral line of business.
- In addition, they should look more favorably upon a software product if it is the premier or principal product of the company rather than just one among a stable of products.
- If the product is an industry application specialty product, buyers should compare the level of commitment each vendor has towards that industry segment.

6. SERVICE ORGANIZATION

- If the product is going to be used at one location, buyers should determine the proximity of the vendor's nearest office.

- If the product is going to be employed in multiple locations, buyers should determine whether the vendor can provide local support at each one.
- Regardless of geographical proximity, buyers should rate the level of competence that the vendor can provide in support of the package.
 - Generally, a staff (even one person) dedicated to the support of a single product is better than one individual supporting a variety of software products.
 - A dedicated headquarters support staff is also important, as long as it is accessible.

7. REFERENCES

- It is very important that references of users of the product be requested and randomly checked.
- If possible, prospective buyers should visit an installation similar to the one for which the software is being bought.
- They should compile a list of at least five questions to ask other users that address key concerns regarding the software package and the vendor.
- References should be requested and checked only when buyers are about to make a final decision. They should be used primarily to verify and validate the results of the buyers' own investigations.

IV CONTRACTS AND NEGOTIATIONS

A. PURCHASE AND LEASE TERMS

- When packaged software is purchased, a buyer is usually paying for a perpetual license for use of the product. Perpetual licenses are employed by sellers of software products for several reasons:
 - This form of "sale" protects the seller's title to the product.
 - The license also allows the vendor to control and restrict the future sale of the product by the licensee.
- If prospective buyers have any intention to resell the packaged software, they should purchase the product, including title to it.
- Leases are usually offered for a software product for a minimum of one or two years.
 - The typical fee for a two-year lease is in the range of 3-5% of the purchase price per month.
 - Leases for less than two years and month-to-month rentals, when available, will usually be at a higher rate and will often involve installations charges that are bundled in the purchase price.

- Acquiring packaged software is most often a long-term commitment on the buyer's part, who should consider a "purchase" rather than a lease if:
 - The funds are available.
 - The buyer's cost of funds are lower than that of the lessor, which is often the case.
- Some vendors will consider extending the purchase payments over a 90-day period to help buyers who have budget or other constraints on their purchasing authority.
- If a purchase credit is not offered against a part of lease payments, buyers should request its inclusion in the contract.
- Although the vendor may have a standard agreement, buyers should remember that many parts of a contract are negotiable.
- When comparing product costs offered by several vendors with different prices and terms:
 - Establish a common denominator, such as the expected useful life of the product or term of the lease.
 - Compute the total cost of using each product over that common period.

B. INSTALLATION

- Normally a certain amount of installation costs is covered by the purchase price.

- Buyers should be sure that the vendor's responsibilities for assisting in the installation are spelled out in the contract.
- Penalties should be spelled out in the contract for incomplete or late installation of the product when the vendor is responsible.
- The amount and kind of installation support and training should be defined in the contract.
 - It should include a description of the qualifications of the personnel who will provide the on-site support, or even the names of the specific individuals.

C. MAINTENANCE AND ENHANCEMENTS

- After installation, a time period for evaluation should be set aside before final acceptance of the product.
 - The period should cover a full cycle of use of the product.
 - If the product is not found to be acceptable, buyers should be able to return it and obtain a full refund.
- The product should be warranted to be free of bugs for at least a year.
 - Procedures for correcting bugs after installation should be provided.
 - A minimum response time for finding bugs should also be defined.
- Many vendors offer maintenance agreements that cover enhancements in addition to repairs.

- Buyers should try to get the right to buy new versions of the product less the price they have already paid for the original version.
- Maintenance agreements are requisite when frequent technological or exogenous changes can be expected to impact the usefulness of the software.

D. MODIFICATIONS

- Any modifications the vendor has agreed to should be included in the contract in detail, with due dates.
- If buyers intend to modify the package, they should be sure that the modifications do not invalidate any warranties or maintenance agreements.

E. FINANCIAL LIABILITY

- The vendor should assume financial liability at least up to the purchase price of the package if it fails to perform as warranted and specified.

F. TITLE

- Vendors should guarantee that the product is proprietary and that they will be defended against any infringement claims involving trademarks, trade secrets or patents.

- Vendors will expect buyers to protect their trade secrets as if these trade secrets were the buyer's own, and not to reproduce the materials the vendor supplied.

G. OTHER FACTORS

- The contract should incorporate into the agreement, as referenced attachments, the proposal and all relevant sales literature.
- If the buyer intends to use the product at several locations or on several machines, that right should be included in the contract.
 - The vendor will probably expect additional fees for multiple use, but these should be at a discount from the standard fees.
 - Consider also the potential use of the software by subsidiaries or other affiliates.
- The vendor company may request the right to assign the lease payments to another organization, but it should not be allowed to assign its obligations under the agreement without the buyer's approval.
- The contract should define what the vendor is going to deliver to the buyer, including:
 - Decks of cards.
 - Tapes.
 - Source documents.
 - Documentation.

- User guides.
- Training.

SUBSCRIPTION PROGRAMS: Designed for clients with a continuing need for information about a range of subjects in a given area. All subscription programs are fixed fee and run on a calendar year basis:

- Planning Service for Computer and Communications Users - Provides managers of large computer/communications facilities with timely and accurate information on developments which affect today's decisions and plans for the future.
- Field Service Planning Information Program - Provides senior field service managers with basic information and data to support their planning and operational decisions.
- Computer Services Market Analysis Service - Provides market forecasts and business information to software and processing services companies to support planning and product decisions.
- Computer Services Company Analysis and Monitoring Program - Provides immediate access to detailed information on over 2,000 companies offering software and processing services in the U.S. and Europe.

MULTICLIENT STUDIES: Research shared by a group of sponsors on topics for which there is a need for in-depth "one-time" information. A multiclient study typically has a budget of over \$100,000, yet the cost to an individual client is usually less than \$10,000. Recent studies specified by clients include:

- Maintenance Requirements For The Information Processing Industry
- Value Added Network Services
- IBM Series/I Analysis

CUSTOM RESEARCH: Custom studies are proprietary to a client. Fees typically range from \$10,000 to over \$100,000 and are a function of the extent of the research work. Examples of recent assignments include:

- Survey Fortune 500/50 companies to determine plans for distributed data processing.
- Compare the internal charges for EDP services in a large company to those of commercially available services.
- Determine the market potential for an associative Relational Data Base Management System Processor.
- Conduct the 1980 ADAPSO Survey of the Computer Services Industry.
- Analyze the opportunities and problems associated with packaging terminals and/or minicomputers with remote computing services.

ABOUT INPUT

THE COMPANY

INPUT provides planning information, analysis, and recommendations to managers and executives in the information processing industries. Through market research, technology forecasting, and competitive analysis, INPUT supports client management in making informed decisions. Continuing services are provided to users and vendors of computers, communications, and office products and services.

The company carries out continuous and in-depth research. Working closely with clients on important issues, INPUT's staff members analyze and interpret the research data, then develop recommendations and innovative ideas to meet clients' needs. Clients receive reports, presentations, access to data on which analyses are based, and continuous consulting.

Many of INPUT's professional staff members have nearly 20 years experience in their areas of specialization. Most have held senior management positions in operations, marketing, or planning. This expertise enables INPUT to supply practical solutions to complex business problems.

Formed in 1974, INPUT has become a leading international consulting firm. Clients include over 100 of the world's largest and most technically advanced companies.

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